

1. How many kilometers are in a light year? A parsec?
2. The star Vega is 8.1 parsecs from the earth. If we could travel at the speed of light, how long would it take us to make a round trip to Vega?
3. It takes light 1.25×10^5 hours to reach the earth from Wolf 424. What is the distance to this star in km, parsecs, and AU?
4. Mercury is 5.79×10^7 km from the sun. How many AU is this distance?
5. Neptune has two moons Triton, 6.536×10^8 m away, and Nereid, 5.57×10^6 km away. What is the minimum and maximum time that it would take a radio signal to travel between the two moons? A diagram might help.
6. It takes light 107 years to reach us from a distant star. How many parsecs is this star away from us?
7. An alien on a planet 8.74 parsecs away calls you on a telephone. How long is the delay in years? How many seconds is this?